CLAIMS

1. A glass sheet quenching method comprising the steps of:

heating a glass sheet on carrying rollers to a predetermined temperature in a heating furnace;

radiating scattered microwaves or converged microwaves onto one side or both sides of the glass sheet through gaps between adjacent multiple air ducts of a quenching apparatus disposed with a substantially uniform spacing with respect to the carrying direction of the glass sheet; and

simultaneously with the radiation of the microwaves, blowing cooling air onto one side or both sides of the glass sheet from the multiple air ducts, without hitting the carrying rollers.

2. The method of claim 1, wherein the frequency of the microwaves is 18GHz to 300GHz.

3. The method of claim 1, wherein the converged microwaves are scan-type converged microwaves scanned with an oscillating mirror.

4. The method of claim 1, wherein the converged microwaves are focused into a band of a length equivalent to the width of the glass sheet.

5. The method of claim 1, wherein the thickness of the glass sheet is 1.2mm to 2.5mm.

6. A glass sheet quenching apparatus installed downstream of a heating furnace for heating a glass sheet traveling on carrying rollers to a predetermined

temperature, the apparatus comprising:

a chamber that is substantially dome-shaped and has its inner surface made a reflecting surface above and/or below the glass sheet;

a reflector provided in the vicinity of the center of the dome;

a waveguide provided in the chamber for guiding microwaves toward the reflector; and

multiple air ducts having between them gaps for allowing microwaves to pass through, disposed with a substantially uniform spacing in the travel direction of the glass sheet, for cooling with air the upper side and/or the lower side of the glass sheet,

wherein the microwaves are radiated onto the glass sheet by the microwaves being primarily reflected with the reflector and secondarily reflected with the inner surface of the dome-shaped chamber.

7. The apparatus of claim 6, wherein the reflector has rotating means for rotating it about the center axis of the waveguide.

8. The apparatus of claim 6, wherein lower air ducts among the multiple air ducts are disposed directly below the carrying rollers and the lower air ducts each have multiple nozzles and the multiple nozzles are disposed so that air blown out of them does not hit the carrying rollers.